

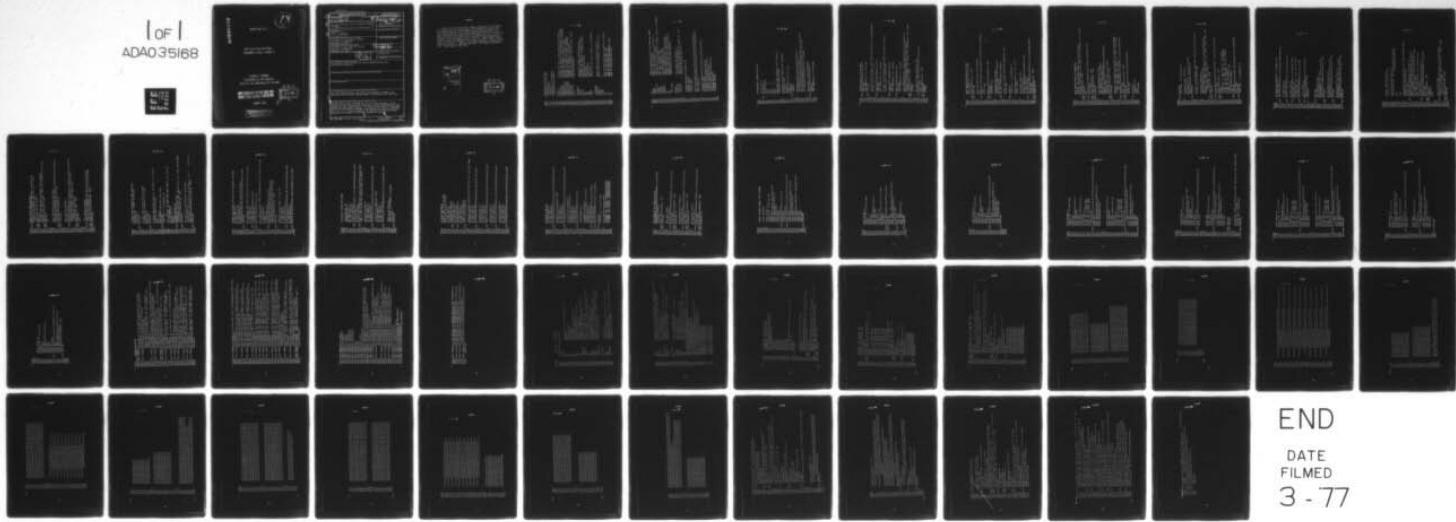
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ARMY LIFE CYCLE COST MODEL; PROGRAMMER'S GUIDE. VOLUME II.(U)
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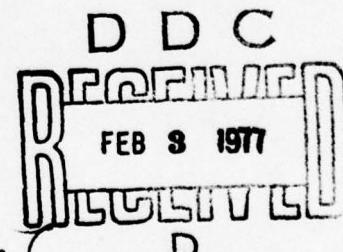
REPORT DCA -R-15

ARMY LIFE CYCLE COST MODEL
PROGRAMMER'S GUIDE, VOLUME II

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Volume 1, User's Guide, describes the Army Life Cycle Cost Model, a time sharing cost model which produces both static and time phased parametric cost estimates for major weapons systems. The output reports conform to the latest Research and Development, Investment, and Operating and Support DA Pamphlets, 11-2, 11-3, 11-4. Program listings of the model and its associated report generator are contained in Volume II, Programmer's Guide.			

FOREWORD

The Army Life Cycle Cost Model (ALCCM), documented in this Programmer's Guide, is a time sharing system which produces both static and time phased parametric cost estimates for major weapons systems. The output reports conform to the latest Research and Development, Investment, and Operating and Support Guides (DA Pamphlets 11-2, 11-3 and 11-4). Program listings of the model and its associated report generator are contained in this Programmer's Guide, Volume II. Sample inputs and outputs, flowcharts and explanations are given in the User's Guide, Volume I. Comments, questions or requests for programs (available as punched cards) should be directed to: DACA-CAS, Room 2B679, the Pentagon, Washington, D. C. 20310 (Autovon 8-225-1118).

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RICH BRANNON  

8-225-1118  

DACA-CAS, THE PENTAGON  

WASHINGTON, DC 20310

REAL:  

A(50,12)      STORAGE  

ACON(14,5)    STORAGE  

ACUR(14,5)    STORAGE  

TRAW(14,5,60) RAW DA  

TCON(14,5,60) STORAGE  

TCUR(14,5,60) STORAGE  

DCON(15,3)    STORAGE  

INF(14,60)    USED FOR  

G(12)

INTEGER:  

IN(15)        STDRAG  

R(15)         SWITCH  

M(15)         SWITCH  

VAL          EVALUA  

ROW          ROW NU  

COL          COLUMN  

YEAR         BASE Y  

SKIP         NUMBER  

            THREE  

FILENAME:  

WORDS(3)      CHECK  

WORD1         "  

WORD2         "  

WORD3         "  

F1             NAME D  

F2             NAME D  

F3             NAME D  

F4             NAME D  

F5             NAME D

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FILE          NAME OF SATELLITE FILES FOR INFL AND DEFNS
MODEL         AIRCO, MICO OR TRACO
DATAF        NAME OF DATA INPUT FILE WHICH MADE FI
LABEL(15)    LABELS FOR KEY COST REPORTS
FYEAR        USED FOR TESTING EQUALITY TO TESTYR1 (ALSO TO TESTYR2)
TESTYR1      THE FIRST "AMOUNT" YEAR
TESTYR2      THE FIRST "PERCENT" YEAR
HEADERS     NAME OF HEADERS MAIN FILE
510C        HEADERS SATELLITE FILE (ROW TITLES)
520C        H1
530C        H2
540C        H3
550C        YR(14,60)
560C
570C        ALPHA:
580C        T1(50,6)
590C        T2(14,6)
600C        T3(6,29)
610C
620C
630        INTEGER IN(15),R(15),M(15),VAL
640        INTEGER ROW,COL
650        INTEGER YEAR
660        INTEGER SKIP
670C
680        REAL G(12),ACDN(14,5),ACUR(14,5),INF(14,60),DCDN(15,3)
690        REAL DCUR(15,3),TCDN(14,5,60),TCUR(14,5,60),TRAW(14,5,60)
700        REAL A(50,12)
710C
720        FILENAME WORDS(3),WORD1,WORD2,F1,F2,F3,F4,F5,FIL
730        FILENAME WORD3
740        FILENAME MODEL,DATAF,LABEL(15)
750        FILENAME FYEAR,TESTYR1,TESTYR2
760        FILENAME HEADERS,H1,H2,H3
770        ALPHA T1(50,6),T2(14,6),T3(6,29)
780        FILENAME YR(14,60)
790        FILENAME NNYEAR
800C

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810      EQUIVALENCE (TRAW,TCOM,TCUR)
820C
830      DD 100 I=1,12
840      100      YR(I,1)="          "
850      NNYEAR=NNYEAR
860      F1=""      "
870      F2=""      "
880      F3=""      "
890      F4=""      "
900      F5=""      "
910      FIL="        "
920      PRINT,"HOW MANY REPORTS, WHICH ONES---"
930      INPUT,NR,(INC(I),I=1,NR)
940C      DETERMINE WHICH REPORTS ARE REQUIRED:
950C      DO 1010 I=1,15
960      VAL=INC(I)
970      IF(VAL.EQ. 0) GO TO 1010
980      R(VAL)=1
990      1000 1010 CONTINUE
1010      LN=999
1020C
1030C      DETERMINE WHICH MATRICES ARE REQUIRED:
1040      IF((R(2)+R(9)).GE. 1) M(2)=1
1050      IF((R(3)+R(4)+R(5)+R(6)+R(7)+R(8)+R(9)).GE. 1) M(3)=1
1060      IF((R(4)+R(5)+R(6)+R(7)+R(8)+R(9)).GE. 1) M(4)=1
1070      IF((R(6)+R(7)+R(8)+R(9)).GE. 1) M(6)=1
1080C
1090C      GET NAMES OF FILES REQUIRED:
1100 1020 PRINT,"COST DATA FILE---"
1110      INPUT,F1
1120      CALL SOPEN(F1," "," "," ",$1020)
1130C
```

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1140 IF(M(2) .NE. 1) GO TO 1040
1150 PRINT,"DEFINITIONS FILE---"
1160 INPUT,F2
1170 CALL SOPEN(F2," "," ",\$1030)
1180 1040 CONTINUE
1190C
1200C IF M(3) IS NOT NEEDED, THEN DON'T NEED APPROP. OR TIME PHASING.
1210 IF(M(3) .NE. 1) GO TO 1190
1220C
1230 1050 PRINT,"APPROPRIATIONS FILE---"
1240 INPUT,F3
1250 CALL SOPEN(F3," "," ",\$1050)
1260C
1270C IF M(4) IS NOT NEEDED, THEN DON'T NEED TIME PHASING.
1280 IF(M(4) .NE. 1) GO TO 1190
1290C
1300 1060 PRINT,"TIME PHASING FILE---"
1310 INPUT,F4
1320 CALL SOPEN(F4," "," ",\$1060)
1330C
1340 1070 PRINT,"INFLATION FILE---"
1350 INPUT,F5
1360 CALL SOPEN(F5," "," ",\$1070)
1370C
1380C READ INFLATION FILE. ALSO, READ THE FILE IT REFERS TO:
1390 READ(F5,9010,END=1080,ERR=1080) LN,WORD1,WORD2
1400 IF(WORD1 .EQ. "APPROP" .AND. WORD2 .EQ. "LOCATION") GO TO 1090
1410 1080 PRINT 9020,F5; STOP
1420 1090 CONTINUE
1430 LN=9999
1440C
1450C GET NAME OF INFL SATELLITE FILE
1460 1100 READ(F5,9010,END=1190,ERR=1110) LN,APR,FIL
1470 GO TO 1120
1480 1110 PRINT 9030,F5,LN; STOP
1490 1120 CONTINUE
1500 LN=888
1510C

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```
1520C READ INFLATION SATELLITE FILE
1530 CALL SOPEN(FIL,"",".",$1130)
1540 GO TO 1140
1550 1130 PRINT 9040,FIL,F5; STOP
1560 1140 CONTINUE
1570C
1580C READ INFLATION DATA INTO STORAGE:
1590 I=1
1600 1150 READ(FIL,9010,END=1170,ERR=1160) LN,YR(APR,I),INF(APR,I)
1610 I=I+1
1620 GO TO 1150
1630C
1640 1160 PRINT 9050,FIL,F5,LN,FIL; STOP
1650 1170 CONTINUE
1660 CLOSEFILE FIL
1670C
1680C CALCULATE REST OF INF:
1690 RATIO=INF(APR,I-1)/INF(APR,I-2)
1700 DO 1180 J=I,60
1710 1180 INF(APR,J)=INF(APR,J-1)*RATIO
1720C LOCATE AND PROCESS NEXT INFL SATELLITE FILE
1730C
1740 GO TO 1100
1750C
1760 1190 CONTINUF
1770 IF(F5 .NE. " ") CLOSEFILE F5
1780C
1790 PRINT,"GIVE WORDS 1,2 AND 3----"
1800 INPUT, WORDS
1810C
1820C READ COST DATA FILE:
1830 DD 2010 I=1,50
1840 READ(F1,9060,END=2015,ERR=2015) LN,C
1850 DD 2010 COL=1,12
1860 2010 A(I,COL)=G(COL)
1870 READ(F1,9010,END=2015,ERR=2015) LN,YEAR,MODEL,DATAF
1880 GO TO 2020
1890 2015 PRINT 9070,LN,F1; STOP
1900 2020 CLOSEFILE F1
```

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1910C READ DEFINITIONS, IF REQUIRED:
1920C IF(M(2) .NE. 1) GO TO 2200
1930 READ(F2,9010,END=2025,ERR=2025) LN,WORD1,WORD2
1940 IF(WORD1 .EQ. "LABEL") .AND. WORD2 .EQ. "LOCATION") GO TO 2030
1950
1960 2025 PRINT 9080,F2; STOP
1970 2030 CONTINUE
1980 I=1
1990 2040 READ(F2,9010,END=2200,ERR=2045) LN,LABEL(I),FIL
2000 GO TO 2050
2010 2045 PRINT 9090,LN,F2; STOP
2020 2046 PRINT 9095,FIL,F2; STOP
2030 2050 CONTINUE
2040C READ DEFN SATELLITE FILE;
2050C CALL SOPEN(FILE,"\$2046")
2060 PROCESS FIL INTO DCON(I,1)
2070C READ(FIL,9010,END=2060,ERR=2060) LN,WORD1,OTY
2080 DCON(I,2)=OTY
2090 IF(WORD1 .EQ. "OTY") GO TO 2070
2100 2060 PRINT 9097,FIL,F2; STOP
2120 2070 CONTINUE
2130C READ(FIL,9010,END=2060,ERR=2060) LN,WORD1,WORD2,WORD3
2140 IF(WORD1 .NE. "ROW" .OR. WORD2 .NE. "COL" .OR. WORD3
2150 .NE. "FRACITION") GO TO 2060
21608 2080 READ(FIL,9010,END=2110,ERR=2090) LN,ROW,COL,FRACTION
2170 2180 GO TO 2100
2190 2090 PRINT 9099,FIL,F2,LN; STOP
2200 2100 CONTINUE
2210 DCON(I,1)=DCON(I,1)+A(ROW,COL)*FRACTION
2220 GO TO 2080
2230C
2240 2110 CONTINUE
2250 CLOSEFILE FIL
2260 I=I+1
2270 GO TO 2040

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2280C
2290 2200 CONTINUE
2300 IF(F2 .NE. " ") CLOSEFILE F2
2310C
2320C CALCULATE DC0N, COLUMN 3:
2330 DD 2120 I=1,15
2340 IF(DCON(I,2) .LE. 0.01) GO TO 2120
2350 DCON(I,3)=DCON(I,1)/DCON(I,2)
2360 2120 CONTINUE
2370C
2380C IF M(3) IS NOT NEEDED, THEN DON'T NEED RPTS 3,4,5,6,7,8:
2390 IF(M(3) .NE. 1) GO TO 2760
2400C
2410C CALCULATE ACON(14,5)
2420C READ APPROPRIATION FILE:
2430 READ(F3,9010,END=2210,ERR=2240) LN,WORD1,WORD2,WORD3
2440 IF(WORD1 .EQ. "ROW" .AND. WORD2 .EQ. "CODE" .AND. WORD3 .EQ.
24508 "FRACTION") GO TO 2220
2460 2210 PRINT 9110,F3;
2470 2220 CONTINUE
2480C
2490 2230 READ(F3,9010,END=2270,ERR=2240) LN,ROW,CODE,FRACTION
2500 GO TO 2250
2510 2240 PRINT 9120,LN,F3;
2520 2250 PHASE=0
2530 IF(ROW .GE. 1 .AND. ROW .LE. 11) PHASE=1
2540 IF(ROW .GE. 12 .AND. ROW .LE. 23) PHASE=2
2550 IF(ROW .GE. 24 .AND. ROW .LE. 47) PHASE=3
2560 IF(ROW .EQ. 49) PHASE=4
2570 IF(PHASE .NE. 0) GO TO 2260
2580 PRINT 9120,LN,F3;STOP
2590 2260 CONTINUE
2600 ACON(CODE,PHASE)=ACON(CODE,PHASE)+A(ROW,11)*FRACTION
2610 GO TO 2230
2620 2270 CONTINUE
2630 IF(F3 .NE. " ") CLOSEFILE F3

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2640C
2650C DO TOTALS AND PERCENTS IN ACON(14,5);
2660 DO 2280 ROW=1,10
2670 2280 ACON(ROW,4)=ACON(ROW,1)+ACON(ROW,2)+ACON(ROW,3)
2680C
2690 DO 2290 COL=1,4
2700 DO 2290 ROW=1,10
2710 2290 ACON(11,COL)=ACON(11,COL)+ACON(ROW,COL)
2720C
2730 DO 2295 COL=1,4
2740 2295 ACON(13,COL)=ACON(11,COL)+ACON(12,COL)
2750 TOTAL=ACON(13,4)
2760 IF(ABS(TOTAL) .LE. 0.001) GO TO 2320
2770 DO 2300 ROW=1,13
2780 2300 ACON(ROW,5)=ACON(ROW,4)*100.0/TOTAL
2790C
2800 DO 2310 COL=1,4
2810 2310 ACON(14,COL)=ACON(13,COL)*100.0/TOTAL
2820 ACON(14,5)=ACON(13,5)
2830 2320 CONTINUE
2840C
2850C
2860C
2870 9990 CONTINUE
2880C TEST ACON FOR 100%:
2890 RDDIFF=ACON(13,1)-A(1,11)
2900 IF(ABS(RDDIFF) .LE. 0.05) GO TO 2330
2910 PRINT 9130,F3,ACON(13,1),A(1,11); STOP
2920 2330 CONTINUE
2930C
2940 INDIFF=ACON(13,2)-A(12,11)
2950 IF(ABS(INDIFF) .LE. 0.05) GO TO 2340
2960 PRINT 9140,F3,ACON(13,2),A(12,11); STOP
2970 2340 CONTINUE
2980C
2990 OSDIFF=ACON(13,3)-A(24,11)
3000 IF(ABS(OSDIDFF) .LE. 0.05) GO TO 2350
3010 PRINT 9150,F3,ACON(13,3),A(24,11); STOP
3020 2350 CONTINUE

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3030C IS TIME PHASING NEEDED?
3040C IF(M(4) .NE. 1) GO TO 2760
3050C
3060C
3070C
3080C READ TIME PHASING FILE F4:
3090C PATTERN MUST BE: PHASE, CODE, YEAR(10),YEAR(N)
3100C CODE,YEAR(10),YEAR(N)
3110C ETC.
3120C
3130C LN=0
3140C
3150C DETERMINE FIRST AMOUNT YEAR AND FIRST PERCENT YEAR:
3160C (FIRST SKIP THREE LINES):
3170 DO 2360 I=1,3
3180 2360 READ(F4,9010,END=2380,ERR=2380) LN
3190 READ(F4,9010,END=2380,ERR=2380) LN,TESTYR1
3200C NOTE: TESTYR1 IS THE FIRST AMOUNT YEAR.
3210C ALL BLOCKS MUST HAVE SAME FIRST AMOUNT YEAR:
3220C NEXT SKIP 10 LINES:
3230C NOTE: TESTYR2 IS THE FIRST PERCENT YEAR:
3240 DO 2370 I=1,10
3250 2370 READ(F4,9010,END=2380,ERR=2380) LN
3260 READ(F4,9010,END=2380,ERR=2380) LN,TESTYR2
3270 GO TO 2390
3280 2380 PRINT 9160,F4; STOP
3290 2390 CONTINUE
3300 REWIND F4
3310 LN=0
3320C
3330CC READ A NEW PHASE:
3340C
3350 2400 READ(F4,9010,END=2410,ERR=2410) LN,WORD1,PHASE
3360 IF(WORD1 .EQ. "PHASE" .AND. PHASE .GE. 1 .AND. PHASE
3370, *LE. 4) GO TO 2420
3380 2410 PRINT 9170,F4,LN; STOP
3390 2420 CONTINUE
3400C

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3410C READ A NEW APPROPRIATION:
3420 2430 READ(F4,9010,END=2440,ERR=2440) LN,WORD1,APR
3430 IF(WORD1 •EQ• "CODE" •AND• APR •GE• 1 •AND•
34408 APR •LE• 13) GO TO 2450
3450 2440 PRINT 9180,F4,LN; STOP
3460 2450 CONTINUE
3470 READ(F4,9010,END=2460,ERR=2460) LN,WORD1,WORD2
3480 IF(WORD1 •EQ• "YEAR" •AND• WORD2 •EQ• "AMOUNT") GO TO 2470
3490 2460 PRINT 9190,F4,LN; STOP
3500 2470 CONTINUE
3510 I=1
3520C
3530C
3540C READ TIME PHASE DATA INTO TRAW:
3550 READ(F4,9010,END=2480,ERR=2480) LN,FYEAR,TRAW(APR,PHASE,I)
3560 IF(FYEAR •EQ• TESTYR1) GO TO 2490
3570 2480 PRINT 9200,F4,LN,TESTYR1
3580 2490 CONTINUE
3590C
3600C
3610C READ REST OF AMOUNTS:
3620 DO 2500 I=2,10
3630 2500 READ(F4,9010,END=2510,ERR=2510) LN,NYEAR,TRAW(APR,PHASE,I)
3640 READ(F4,9010,END=2510,ERR=2510) LN,WORD1,WORD2
3650 IF(WORD1 •EQ• "YEAR" •AND• WORD2 •EQ•
36608 "PERCENT") GO TO 2520
3670 2510 PRINT 9210,F4,LN; STOP
3680 2520 CONTINUE
3690 I=11
3700C
3710C
3720C READ ANOTHER PERCENT:
3730 2530 READ(F4,9010,END=2580,ERR=2580) LN,FYEAR,PERCENT
3740 IF(FYEAR •EQ• TESTYR2 •OR• I •GT• 11) GO TO 2550
3750 2540 PRINT 9220,F4,LN,TESTYR2; STOP
3760 2550 CONTINUE
3770C

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```
- 3780C IF THIS LINE IS NEW APR CODE, GO BACK:  
3790  IF (FYEAR .NE. "CODE") GO TO 2560  
3800  BACKSPACE F4  
3810  GO TO 2430  
3820  2560  CONTINUE  
3830C IF THIS LINE IS NEW PHASE, GO BACK:  
3840C IF (FYEAR .NE. "PHASE") GO TO 2570  
3850  BACKSPACE F4  
3860  GO TO 2400  
3870  2570  CONTINUE  
3880C IF THIS LINE IS NOT A NEW APR OR PHASE, IT IS DATA:  
3890C TRAW(APR,PHASE,I)=PERCENT  
3900C I=I+1  
3910  GO TO 2530  
3920  DONE READING TIME DATA INTO TRAW:  
3930C 2580 CONTINUE  
3940C IF (F4 .NE. " ") CLOSEFILE F4  
3950C TEST PERCENTS TO MAKE SURE THEY ADD TO 1.00 (OR 0.0)  
3960C DO 2600 ROW=1,12  
3970C 2600 COL=1,4  
3980C SUM=0.0  
3990C DO 2600 ROW=1,12  
4000C DO 2600 COL=1,4  
4010C SUM=0.0  
4020C DO 2590 IPAG=11,57  
4030C SUM=SUM+TRAW(ROW,COL,IPAG)  
4040C IF (ABS(SUM) .LE. 0.01 .OR. ABS(SUM-1.0) .LE. 0.001) GO TO 2600  
4050C PRINT 9230,PHASE,APR,F4; STOP  
4060C 2600 CONTINUE  
4070C ARE INF AND YR SYNCHRONIZED WITH TRAW?  
4080C DO 2610 ROW=1,12  
4090C IF (YR(ROW,1) .EQ. TESTYR1 .OR. YR(ROW,1) .EQ. " ") GOTO 2610  
4100C PRINT 9240,ROW,YR(ROW,1),TESTYR1; STOP  
4110C 2610 CONTINUE  
4120C 4130C
```

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— 4140C CHANGE RAW CURRENT DOLLARS INTO CONSTANT DOLLARS:
4150 DO 2620 ROW=1,12
4160 DO 2620 COL = 1,4
4170 DO 2620 IPAG=1,10
4180 IF(INF (ROW,IPAG) *LE. 0.01) GO TO 2620
4190 TCON (ROW,COL,IPAG)=TRAW (ROW,COL,IPAG) *INF (ROW,IPAG)
4200 2620 CONTINUE
4210C
4220C PUT CONSTANT AMTS FROM ACVN(14,5) INTO TCON, PAGE 60:
4230 DO 2630 ROW=1,10
4240 DO 2630 COL=1,3
4250 2630 TCON (ROW,COL,60)=ACVN (ROW,COL)
4260 DO 2635 COL=1,3
4270 2635 TCON (12,COL,60)=ACVN (12,COL)
4280C PUT RESIDUE (TOTALS MINUS CONSTANT AMTS) INTO TCON, PAG 59:
4290C
4300 DO 2650 ROW=1,12
4310 DO 2650 COL=1,4
4320 AMOUNT=0.0
4330 DO 2640 IPAG=1,10
4340 2640 AMOUNT=AMOUNT+TCON (ROW,COL,IPAG)
4350 TCON (ROW,COL,59)=TCON (ROW,COL,60)-AMOUNT
4360 IF(TCON (ROW,COL,59) *GE. 0.0) GO TO 2650
4370 PRINT 9250,F4,COL,ROW; STOP
4380 2650 CONTINUE
4390C
4400C CALCULATE TCON, PAGES 11 THRU 57:
4410 DO 2660 ROW=1,10
4420 DO 2660 COL=1,3
4430 DO 2660 IPAG=11,57
4440 2660 TCON (ROW,COL,IPAG)=TCON (ROW,COL,59)*TRAW (ROW,COL,IPAG)
4450 DO 2665 COL=1,3
4460 DO 2665 IPAG=11,57
4470 2665 TCON (12,COL,IPAG)=TCON (12,COL,59)*TRAW (12,COL,IPAG)
— 4480C

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4490C CALCULATE TOTALS FOR TCON:

4500C CALCULATE ROW 13:
4510C CALCULATE ROW 11:
4520C DO 2670 COL=1,3
4530 DO 2670 IPAG=1,60
4540 DO 2670 ROW=1,10
4550 DO 2670 TCON(11,COL,IPAG)=TCON(11,COL,IPAG)+TCON(ROW,COL,IPAG)
4560 DO 2675 COL=1,3
4570 DO 2675 IPAG=1,60
4580 DO 2675 ROW=1,13
4590 DO 2675 TCON(13,COL,IPAG)=TCON(11,COL,IPAG)+TCON(12,COL,IPAG)
4600C ROWS 11 AND 13 ARE NOW COMPLETE (COLS 1-3 ONLY).
4610C CALCULATE COLUMN 4:
4620C DO 2680 ROW=1,13
4630 DO 2680 IPAG=1,60
4640 DO 2680 COL=1,3
4650 DO 2680 TCON(ROW,4,IPAG)=TCON(ROW,4,IPAG)+TCON(ROW,COL,IPAG)
4660C CALCULATE "TO COMPLETE" HERE:
4661C DO 2681 ROW=1,13
4662C DO 2681 COL=1,4
4663 DO 2681 IPAG=29,57
4664 DO 2681 TCON(ROW,COL,58)=TCON(ROW,COL,58)+TCON(ROW,COL,IPAG)
4665 DO 2681 TCON(ROW,COL,58)=TCON(ROW,COL,58)+TCON(ROW,COL,IPAG)
4666 DO 2681 TCON(ROW,COL,58)=TCON(ROW,COL,58)+TCON(ROW,COL,IPAG)
4667C TCON IS NOW COMPLETE.
4670C FIRST PRINT ALL CONSTANT \$ REPORTS:
4680C GO TO 2760
4681C CONTINUE
4682 GO TO 2760
4683 CONTINUE
4690C

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```
— 4700C IS TCUR REQUIRED?
 4710   IF(M(6) .NE. 1) GO TO 2760
 4720C FIRST ZERO OUT ALL TOTALS,
 4730   DO 2682 ROW=1,13
 4740   DO 2682 COL=1,4
 4745   TCON (ROW,COL,58)=0.0
 4750 2682 TCON (ROW,COL,60)=0.0
 4760   DO 2684 ROW=1,13
 4770   DO 2684 IPAG=1,57
 4780 2684 TCON (ROW,4,IPAG)=0.0
 4790   DO 2686 COL=1,3
 4800   DO 2686 IPAG=1,57
 4810   TCON (11,COL,IPAG)=0.0
 4820 2686 TCON (13,COL,IPAG)=0.0
 4830C
 4840C CALCULATE CURRENT AMOUNTS FROM TCON AND INF, PUT INTO TCUR *
 4850   DO 2690 ROW=1,12
 4860   DO 2690 COL=1,4
 4870   DO 2690 IPAG=1,57
 4880 2690 TCUR (ROW,COL,IPAG)=TCON (ROW,COL,IPAG)*INF (ROW,IPAG)
 4890C
 4900C CALCULATE ROW 11:
 4910   DO 2710 COL=1,3
 4920   DO 2710 IPAG=1,57
 4930   DO 2710 ROW=1,0
 4940 2710 TCUR (11,COL,IPAG)=TCUR (11,COL,IPAG)+TCUR (ROW,COL,IPAG)
 4950C
 4960C CALCULATE ROW 13:
 4970   DO 2715 COL=1,3
 4980   DO 2715 IPAG=1,57
 4990 2715 TCUR (13,COL,IPAG)=TCUR (11,COL,IPAG)+TCUR (12,COL,IPAG)
 5000C
 5010C CALCULATE COLUMN 4:
 5020   DO 2720 ROW=1,13
 5030   DO 2720 IPAG=1,57
 5040   DO 2720 COL=1,3
 5050 2720 TCUR (ROW,4,IPAG)=TCUR (ROW,4,IPAG)+TCUR (ROW,COL,IPAG)
  —
```

```

      - 5070C   CALCULATE PAGE 60:
      5080     DO 2725 ROW=1,13
      5090     DO 2725 COL=1,4
      5100     DO 2725 IPAG=1,57
      5110 2725 TCUR(ROW,COL,60)=TCUR(ROW,COL,60)+TCUR(ROW,COL,IPAG)
      5120C
      5121C   CALCULATE "TO COMPLETE" HERE:
      5122     DO 2726 ROW=1,13
      5123     DO 2726 COL=1,4
      5124     DO 2726 IPAG=29,57
      5125 2726 TCUR(ROW,COL,58)=TCUR(ROW,COL,58)+TCUR(ROW,COL,IPAG)
      5126C
      5130C   IS ACUR(14,5) REQUIRED?
      5140     IF(R(8)•NE.1) GO TO 2760
      5150C   CALCULATE ACUR:
      5160     DO 2730 ROW=1,13
      5170     DO 2730 COL=1,4
      5180 2730 ACUR(ROW,COL)=TCUR(ROW,COL,60)
      5190C
      5200     TOTAL=ACUR(13,4)
      5210C
      5220C   CALCULATE PERCENTS:
      5230     IF(TOTAL•LE.0.001) GO TO 2760
      5240     ACUR(14,5)=100.0
      5250     DO 2740 ROW=1,13
      5260 2740 ACUR(ROW,5)=ACUR(ROW,4)*100.0/TOTAL
      5270     DO 2750 COL=1,4
      5280 2750 ACUR(14,COL)=ACUR(13,COL)*100.0/TOTAL
      5290C
      5300 2760 CONTINUE
      5305     IF(LLCUR.EQ.1) GO TO 3056
      5310C
      5320C   READ REPORT HEADINGS HERE:
      5330     IF(MODEL•EQ."AIRCD") HEADERS="AIRHD*"
      5340     IF(MODEL•EQ."WICD") HEADERS="WICHD*"
      5350     IF(MODEL•EQ."TRACD") HEADERS="TRAHD*"
      5360C

```

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```
5370C GET LOCATION OF HEADERS FILES:  
      READ(HEADERS,9010,END=2800,ERR=2800) LN,HI,H2,H3  
      CLOSEFILE HEADERS  
5400      GO TO 2810  
5410 2800 PRINT 9260,HEADERS; STOP  
5420 2810 CONTINUE  
5430C  
5440C READ ROW TITLES:  
      DD 2820 I=1,50  
5450 2820 READ(HI,9280,END=2830,ERR=2830) LN,(T1(I,J),J=1,6)  
5460 2830 GO TO 2840  
5470 2830 PRINT 9270,HI,HEADERS; STOP  
5480 2840 CLOSEFILE HI  
5490  
5500C  
5510C READ APPROPRIATION TITLES:  
5520      DD 2850 I=1,14  
5530 2850 READ(H2,9280,END=2860,ERR=2860) LN,(T2(I,J),J=1,6)  
5540 2860 GO TO 2870  
5550 2860 PRINT 9270,H2,HEADERS; STOP  
5560 2870 CLOSEFILE H2  
5570C  
5580C READ COLUMN TITLES:  
5590      DD 2880 I=1,6  
5600 2880 READ(H3,9290,END=2890,ERR=2890) LN,(T3(I,J),J=1,29)  
5610 2890 GO TO 2900  
5620 2890 PRINT 9270,H3,HEADERS; STOP  
5630 2900 CLOSEFILE H3
```

5640C PAUSE "ADJUST PAPER. GIVE RETURN"
5650
5660C PRINT REPORTS:
5670C
5680C
5690C
5700 PRINT REPORT 1:
IF(R(1) *NE. 1) GO TO 2920
PRINT." "
5710 PRINT 9523: PRINT 9523: PRINT 9521
5720 PRINT 9530, GDAT(O), A(50, 11)
5730 PRINT 9551, YEAR
5740 PRINT 9523
5750 PRINT 9523
5760 DD 2909 I=1,4
5770 2909 PRINT 9502, (T3(I,J), J=1,29)
5780 PRINT 9510
5790 DD 2910 I=1,50
5800 2910 PRINT 9540,I,(T1(I,J),J=1,6),(A(I,J),J=1,12)
5810 PRINT 9510
5820 PRINT 9560, MODEL, DATAF, WORDS(I), I=1,3)
5830 PRINT 9560, F1, F2, F3, F4, F5
5840 PRINT 9529
5850 PRINT 9529: PRINT 9529: PRINT 9529: PRINT 9529
5860 PRINT 9526
5870 PRINT 9523
5880 PRINT 9521
5890 2920 CONTINUE
5900C

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```
5910C PRINT REPORT 2*
5920C IF(R(2) .NE. 1) GO TO 2950
5930 SKIP=1
5940 PRINT,"."
5950 PRINT 9529
5960 PRINT 9531,GDAT(0),A(50,11)
5970 PRINT 9552,YEAR
5980 PRINT 9511
5990 DO 2931 I=1,14
6000 IF(DCON(I,1) .GE. 0.01) GO TO 2930
6010 SKIP=SKIP+1
6020 GO TO 2931
6030 PRINT 9541,LABEL(I),(DCDN(I,J),J=1,3)
6040 2930 CONTINUE
6050 2931 CONTINUE
6060 PRINT 9511
6070 PRINT 9560, MODEL, DATAF, WORDS(I),I=1,3)
6080 PRINT 9560,F1,F2,F3,F4,F5
6090 DO 2940 I=1,SKIP
6100 2940 PRINT 9521
6110 PRINT 9529
6120 PRINT 9529;PRINT 9526
6130 PRINT 9521
6140 2950 CONTINUE
6150C
```

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```
- 6160C
6170C PRINT REPORT 3*
6180C IF(R(3) .NE. 1) GOTO 2970
6190 PRINT,"."
6200 PRINT 9529
6210 PRINT 9531,GDAT(O),A(50,11)
6220 PRINT 9553,YEAR
6230 PRINT 9597
6240 PRINT 9511
6250 PRINT 9511
6260 DO 2960 I=1,14
6270 2960 PRINT 9543,(T2(I,J),J=1,6),(ACON(I,J),J=1,5)
6280 PRINT 9511
6290 PRINT 9560,MODEL,DATAF,(WORDDS(I),I=1,3)
6300 PRINT 9560,F1,F2,F3,F4,F5
6310 PRINT 9529:PRINT 9529
6320 PRINT 9526:PRINT 9522
6330 2970 CONTINUE
6340C
6350C
6360C
```

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```
— 6370C PRINT REPORT 4*
      IF(R(4) .NE. 1) GO TO 3020
      PRINT,"."
      PRINT 9522
      PRINT 9530, GDAT(0),A(50,11)
      PRINT 9554,YEAR
      PRINT 9522
      PRINT 9500,(T3(5,J),J=1,29)
      PRINT 9510
      DD 3000 COL=1,3
      IF(COL .EQ. 1) PRINT 9581
      IF(COL .EQ. 2) PRINT 9582
      IF(COL .EQ. 3) PRINT 9583
      DO 3000 I=1,13
      6410 3000 PRINT 9570,(T2(I,J),J=1,3),(TCN(I,COL,IPAG),IPAG=1,15)
      6420
      6430
      6440
      6450
      6460
      6470
      6480
      6490
      6500
      6510
      6520
      6530
      6540
      6550
      6560C
      6570C
      6580C
      6590
      6600
      6610
      6620
      6630
      6640
      6650
      6660
      6670
      6680
      6690
      6700&
      6710
      6720
      6730
      6740
      6750
      6760 3020 CONTINUE

      PRINT 9530, GDAT(0),A(50,11)
      PRINT 9554,YEAR
      PRINT 9522
      PRINT 9500,(T3(6,J),J=1,29)
      PRINT 9510
      DD 3010 COL=1,3
      IF(COL .EQ. 1) PRINT 9581
      IF(COL .EQ. 2) PRINT 9582
      IF(COL .EQ. 3) PRINT 9583
      DO 3010 I=1,13
      6700& 3010 PRINT 9571,(T2(I,J),J=1,3),(TCN(I,COL,58),TCN(I,COL,60),IPAG=16,28),
      PRINT 9560,MODEL,DATAF,(WORDS(I),I=1,3)
      PRINT 9560,F1,F2,F3,F4,F5
      PRINT 9522
      PRINT 9521
```

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```
— 6770C PRINT REPORT 5:  
6780C IF(R(5) .NE. 1) GO TO 3050  
6790C PRINT,"."  
6800C PRINT 9523: PRINT 9523: PRINT 9522  
6810C IF(R(5) .NE. 1) GO TO 3050  
6820C PRINT 9530, GDAT(0), A(50, 11)  
6830C PRINT 9555, YEAR  
6840C PRINT 9500, (T3(5,J), J=1, 29)  
6850C PRINT 9510  
6860C PRINT 9510  
6870C DO 3030 I=1, 13  
6880C PRINT 9570, (T2(I,J), J=1, 3), (TCN(I,4,IPAG), IPAG=1, 15)  
6890C PRINT 9570, (T2(I,J), J=1, 3), (TCN(I,4,IPAG), IPAG=1, 15)  
6900C PRINT 9510  
6910C  
6920C  
6930C  
6940C PRINT 9522  
6950C PRINT 9500, (T3(6,J), J=1, 29)  
6960C PRINT 9510  
6970C DO 3040 I=1, 13  
6980C PRINT 9571, (T2(I,J), J=1, 3), (TCN(I,4,IPAG), IPAG=16, 28),  
6990C TCON(I,4,58), TCON(I,4,60)  
7000C PRINT 9510  
7010C PRINT 9560, MODEL, DATAF, (WORD$ (I), I=1, 3)  
7020C PRINT 9560, F1, F2, F3, F4, F5  
7030C PRINT 9529  
7040C PRINT 9523  
7050C  
7060C 3050 CONTINUE  
7066C 3055 CONTINUE  
7070C  
7080C IF CURRENT $ RPTS ARE NEEDED, GO BACK, CALCULATE, THEN RETURN HERE,  
7082C IF(M(6) .EQ. 1) LCUR=1  
7083C IF(LLCUR .EQ. 1) GO TO 2679  
— 7084C 3056 CONTINUE
```

```

7090C
7100C
7110C      PRINT REPORT 6*
    IF(B(6) .NE. 1) GO TO 3080
    PRINT ","
7130      PRINT 9521,PRINT 9523
7140      PRINT 9530, GDAT(0),TCUR(13,4,60)
7150      PRINT 9590
7160      PRINT 9500,(T3(5,J),J=1,29)
7170      PRINT 9510
7180      DO 3060 COL=1,3
7190      IF(COL .EQ. 1) PRINT 9581
7200      IF(COL .EQ. 2) PRINT 9582
7210      IF(COL .EQ. 3) PRINT 9583
7220      IF(COL .EQ. 1,13
7230      DO 3060 I=1,13
7240      PRINT 9570,(T2(I,J),J=1,3),(TCUR(I,COL,IPAG),IPAG=1,15)
7250      PRINT 9510
7260      PRINT 9560,MODEL,DATAF,(WORDS(I),I=1,3)
7270      PRINT 9560,F1,F2,F3,F4,F5
7280      PRINT 9523; PRINT 9522
7290      PRINT 9523
7300C
7310C
7320C
7330      PRINT 9530,GDAT(0),TCUR(13,4,60)
7340      PRINT 9590
7350      PRINT 9500,(T3(6,J),J=1,29)
7360      PRINT 9510
7370      DO 3070 COL=1,3
7380      IF(COL .EQ. 1) PRINT 9581
7390      IF(COL .EQ. 2) PRINT 9582
7400      IF(COL .EQ. 3) PRINT 9583
7410      DO 3070 I=1,13
7420      3070 PRINT 9571,(T2(I,J),J=1,3),(TCUR(I,COL,IPAG),IPAG=16,28),
7430&          TCUR(I,COL,58),TCUR(I,COL,60)
7440      PRINT 9510
7450      PRINT 9560,MODEL,DATAF,(WORDS(I),I=1,3)
7460      PRINT 9560,F1,F2,F3,F4,F5
7470      PRINT 9521
7480      3080 CONTINUE

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—7490C
7500C PRINT REPORT 7*
7510C IF(R(7) .NE. 1) GO TO 3110
7520 PRINT " "
7530 PRINT " "
7540 PRINT 9523; PRINT 9523; PRINT 9522
7550 PRINT 9530, GDAT(0), TCUR(13,4,60)
7560 PRINT 9595
7570 PRINT 9500, (T3(5,J), J=1,29)
7580 PRINT 9510
7590 DO 3090 I=1,13
7600 3090 PRINT 9570, (T2(I,J), J=1,3), (TCUR(I,4,IPAG), IPAG=1,15)
7610 PRINT 9510
7620C
7630C
7640 PRINT 9522
7650 PRINT 9500, (T3(6,J), J=1,29)
7660 PRINT 9510
7670 DO 3100 I=1,13
7680 3100 PRINT 9571, (T2(I,J), J=1,3), (TCUR(I,4,IPAG), IPAG=16,28),
7690& TCUR(I,4,58), TCUR(I,4,60)
7700 PRINT 9510
7710 PRINT 9560, MODEL, DATAF, (WORDS(I), I=1,3)
7720 PRINT 9560, F1, F2, F3, F4, F5
7730 PRINT 9529
7740 PRINT 9523
7750C
7760 3110 CONTINUE
-7770C

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```
— 7780C
7790C
7800C
7810C
7820      PRINT REPORT 8:
7830      IF(R(8) .NE. 1) GO TO 3130
7840      PRINT "."
7850      PRINT 9531, GDAT(0), ACUR(13,4)
7860      PRINT 9596
7870      PRINT 9597
7880      PRINT 9511
7890      DO 3120 I=1,14
7900 3120  PRINT 9543,(T2(I,J),J=1,6),(ACUR(I,J),J=1,5)
7910      PRINT 9511
7920      PRINT 9560,MODEL,DATAF,(WORDS(I),I=1,3)
7930      PRINT 9560,F1,F2,F3,F4,F5
7940      PRINT 9529;PRINT 9529;PRINT 9529
7950 3130  CONTINUE
7960C
7970C
7980C
```

FORMATS SECTION

— 7990C 9010 FORMAT(V)
8010 9020 FORMAT(IH-,"ERROR IN FIRST LINE OF INFLATION FILE ",A8,/,/
8020& "XMUST READ: LN APPROP LOCATION ",//,8(********))
8030 9030 FORMAT(IH-,"ERROR IN INFLATION FILE ",A8,/,/
8040& "XON OR NEAR LINE ",15,/
8050& "X EACH LINE OF FILE MUST READ: LN APR FIL ",///
8060& "X WHERE APR IS AN INTEGER, AND FIL IS A FILENAME.",//,
8070& "X",8(********))
8080 9040 FORMAT(IH-,"UNABLE TO LOCATE FILE ",A8," CALLED FOR BY FILE ",A8,/,/
8090& "XCHECK BOTH FILES AND START OVER.",//,8(********))
8100 9050 FORMAT(IH-,"ERROR OCCURRED TRYING TO READ FILE ",A8,/,/
8110& "(CALLED FOR BY FILE ",A8,").",//,
8120& "XCHECK ON OR NEAR LINE ",15," OF FILE ",A8,/,/8(********)) MAY 1976
8130 9060 FORMAT(13.1X,F11.2,F12.2,F7.2)
8140 9070 FORMAT(IH-,"ERROR ON LINE ",15," OF COST DATA FILE ",A8,
8150& //,8(********))
8160 9080 FORMAT(IH-,"ERROR ON FIRST LINE OF DEFINITIONS FILE ",A8,
8170& //,"XFIRST LINE MUST READ: LN LABEL LOCATION",//,
8180& 8(********))
8190 9090 FORMAT(IH-,"ERROR ON OR NEAR LINE ",15," OF DEFINITIONS FILE ",A8,
8200& //,8(********))
8210 9095 FORMAT(IH-,"ERROR IN READING FILE ",A8,/,/
8220& "XCALLED FOR BY DEFINITION FILE ",A8,/,/8(********))
8230 9097 FORMAT(IH-,"ERROR IN FILE: ",A8," CALLED FOR BY FILE: ",A8,/,/
8240& "XFIRST LINE MUST BE: LN QTY N",//,
8250& "XSECOND LINE MUST BE: ROW COL FRACTION",//,8(********))
8260 9099 FORMAT(IH-,"ERROR IN FILE: ",A8,/,/"XCALLED FOR BY FILE: ",A8,
8270& //,"XON OR NEAR LINE ",15,//,8(********))
8280 9100 FORMAT(IH-,"ERROR ON OR NEAR LINE ",15," OF LOCATION FILE ",A8,
8290& //,8(********))
8300 9110 FORMAT(IH-,"ERROR ON FIRST LINE OF APPROPRIATIONS FILE ",A8,
8310& //,"XFIRST LINE MUST READ: LN ROW CODE FRACTION",//,
8320& 8(********))

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```
— 8330 9120 FORMAT(1H-,"ERROR ON OR NEAR LINE ",15," OF APPROPRIATION FILE ",A8,
  8340&   //,8("****"))
  8350 9130 FORMAT(1H-,"APPROPRIATION FILE ",A8," RESULTS IN ",F12.3,"/",
  8360&   "XOF R&D COST, BUT THE COST DATA FILE CONTAINS ",F12.3,"///",
  8370&   "XOF R&D COST.", //,8("****"))
  8380 9140 FORMAT(1H-,"APPROPRIATION FILE ",A8," RESULTS IN ",F12.3,"/",
  8390&   "XOF INV COST, BUT THE COST DATA FILE CONTAINS ",F12.3,"///",
  8400&   "XOF INV COST.", //,8("****"))
  8410 9150 FORMAT(1H-,"APPROPRIATION FILE ",A8," RESULTS IN ",F12.3,"/",
  8420&   "XOF D&S COST, BUT THE COST DATA FILE CONTAINS ",F12.3,"///",
  8430&   "XOF D&S COST.", //,8("****"))
  8440 9160 FORMAT(1H-,"ERROR IN FIRST 15 LINES OF TIME PHASING FILE ",A8,
  8450&   //,8("****"))
  8460 9170 FORMAT(1H-,"ERROR IN TIME PHASING FILE ",A8," ON OR NEAR LINE ",15,
  8470&   //,"XEXPECTED: LN PHASE N", //,8("****"))
  8480 9180 FORMAT(1H-,"ERROR IN TIME PHASING FILE ",A8," ON OR NEAR LINE ",15,
  8490&   //,"XEXPECTED: LN CODE N", //,8("****"))
  8500 9190 FORMAT(1H-,"ERROR IN TIME PHASING FILE ",A8," ON OR NEAR LINE ",15,
  8510&   //,"XEXPECTED: LN YEAR AMOUNT", //,8("****"))
  8520 9200 FORMAT(1H-,"ERROR IN TIME PHASING FILE ",A8," ON OR NEAR LINE ",15,
  8530&   //,"XEXPECTED: LN YR $$,$ WHERE YR=",A8, //,1
  8540&   8("****"))
  8550 9210 FORMAT(1H-,"ERROR IN TIME PHASING FILE ",A8," ON OR NEAR LINE ",15,
  8560&   //,"XEXPECTED: LN YEAR PERCENT", //,8("****"))
  8570 9220 FORMAT(1H-,"ERROR IN TIME PHASING FILE ",A8," ON OR NEAR LINE ",15,
  8580&   //,"XEXPECTED: LN YR %", //,"WHERE YR=",A8, //,8("****"))
  8590 9230 FORMAT(1H-,"PERCENTS DO NOT ADD TO 1.0, PHASE: ",I4, //,,
  8600&   "XAPPROPRIATION CODE: ",I4, //,,
  8610&   "XCHECK FILE ",A8, //,8("****"))
  8620 9240 FORMAT(1H-,"FIRST YEAR OF INFLATION DATA, CODE: ",I4,"//",
  8630&   "XWAS ",A8," SHOULD HAVE BEEN SAME AS TIME PHASING: ",A8, //,,
  8640&   8("****"))
  8650 9250 FORMAT(1H-,"TIME PHASING FILE: ",A8," (YEAR AMOUNTS SECTION)", //,
  8660&   "XSPECIFIED AMOUNTS GREATER THAN LIFE CYCLE TOTAL, PHASE ",I4,
  8670&   //,"XAPPROPRIATION CODE ",I4, //,8("****"))
  8680 9260 FORMAT(1H-,"ERRP. CHECK FILE: ",A8, //,8("****"))
  8690 9270 FORMAT(1H-,"ERRP. CHECK FILE: ",A8, "CALLED FOR BY FILE: ",
  8700&   A8, //,8("****"))
```

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8710 9280 FORMAT(13,1X,6(A4))
8720 9290 FORMAT(11,1X,29(A4))
8730 9300 FORMAT(1H,6(A4))
8740 9400 FORMAT(1H,6(A4))
8750 9500 FORMAT(1H,29(A4))
8760 9502 FORMAT(1H,2X,29(A4))
8770 9510 FORMAT(1H,29("===="))
8780 9511 FORMAT(1H,15("===="))
8790 9521 FORMAT(1H)
8800 9522 FORMAT(1HO)
8810 9523 FORMAT(1H-)
8820 9526 FORMAT(1H-,1H-)
8830 9529 FORMAT(1H-,1H-,1H-)
8840 9530 FORMAT(1H,10X,"DATE: ",A8,60X,"TOTAL SYSTEM COST:",F8.1,"//")
8850 9531 FORMAT(1H,5X,"DATE: ",A8,10X,"TOTAL SYSTEM COST:",F8.1,"//")
8860 9540 FORMAT(1H,12,6(A4),F6.1,8(F8.1),2(F8.1),F6.1)
8870 9541 FORMAT(1H,2X,A8,F15.1,F15.1,F15.4)
8880 9543 FORMAT(1H,6(A4),4(F8.1),F6.1)
8890 9551 FORMAT(1H,35X,"REPORT 1---COST ELEMENT BY SYSTEM STRUCTURE",//,
8900& 40X,"IN MILLIONS OF CONSTANT ",12," DOLLARS")
8910 9552 FORMAT(1H,10X,"REPORT 2---KEY COST DEFINITIONS",//,
8920& 9X,"IN MILLIONS OF CONSTANT ",12," DOLLARS",//,,
8930& 21X,"TOTAL",8X,"QUANTITY",8X,"UNIT")
8940 9553 FORMAT(1H,10X,"REPORT 3---APPROPRIATION BY LIFE CYCLE PHASE",//,
8950& 15X,"IN MILLIONS OF CONSTANT ",12," DOLLARS",//,,
8960 9554 FORMAT(1H,35X,"REPORT 4---APPROPRIATION BY YEAR (DETAILED)",//,
8970& 40X,"IN MILLIONS OF CONSTANT ",12," DOLLARS",//,,
8980 9555 FORMAT(1H,35X,"REPORT 5---APPROPRIATION BY YEAR (TOTAL)",//,
8990& 40X,"IN MILLIONS OF CONSTANT ",12," DOLLARS",//,)
9000 9560 FORMAT(1H,4X,5(A8,1X),//)
9010 9570 FORMAT(1H,3(A4),15(F7.1))
9020 9571 FORMAT(1H,3(A4),14(F7.1),F8.1)
9030 9581 FORMAT(1HO,46X,"RESEARCH AND DEVELOPMENT")
9040 9582 FORMAT(1HO,52X,"INVESTMENT")
9050 9583 FORMAT(1HO,47X,"OPERATING AND SUPPORT")

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—
9060 9590 FORMAT(1H ,35X,"REPORT 6---APPROPRIATION BY YEAR (DETAILED)",//,
9070& 41X,"IN MILLIONS OF CURRENT DOLLARS",//)
9080 9595 FORMAT(1H ,35X,"REPORT 7---APPROPRIATION BY YEAR (TOTAL)",//,
9090& 43X,"IN MILLIONS OF CURRENT DOLLARS",//)
9100 9596 FORMAT(1H ,10X,"REPORT 8---APPROPRIATION BY LIFE CYCLE PHASE",//,
9110& 18X,"IN MILLIONS OF CURRENT DOLLARS",//)
9120 9597 FORMAT(1H ,27X,"R&D",5X,"INV",5X,"O&S",3X,"TOTAL",3X,"PERCENT")
9130 STOP; END

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10:01EST 02/03/76

100C
110C
120C
130C SF SHIFT FACTOR FOR CHANGING BASE YEAR
140C KN QUANTITY
150C YN NUMBER OF YEARS
160C AC AVERAGE COST
170C CF COST FACTOR
180C UC THEORETICAL FIRST UNIT COST
190C EC EXPERIENCE CURVE SLOPES
200C BC(1) NATURAL LOG(EC(1)) / NAT LOG(2.0)
PB PREVIOUS BUY QUANTITY
PC PHYSICAL OR PERFORMANCE CHARACTERISTIC
THRUPUTS THRUPUTS • ADDED TO COST CELLS
210C
220C
230C A(50,12) STORAGE OF COST RESULTS
240C F(5) TEMPORARY STORAGE FOR FIVE DATA INPUT ELEMENTS
250C AMT THRUPUTS AMOUNTS IN MILLIONS (UNSHIFTED)
260C
270C SFX VALUE OF SHIFT FACTOR TO BE USED
INFTP INFLATED (SHIFTED) VALUE OF AMT
SUMTP ACCUMULATOR FOR SUM(THRUPUTS), SHIFTED
SUMMAT ACCUMULATOR FOR SUM(THRUPUTS), BEFORE SHIFTING
G(12) TEMPORARY STORAGE FOR 12 OUTPUT DATA ELEMENTS
XX(300,10) STORAGE FOR INPUT DATA
330C
340C INTEGER:
LN
350C YEAR
360C COLM
370C MROW(CUL)
380C 'IN
390C
LINE NUMBER
2 DIGIT IDENTIFIER FOR RESULTS AFTER SHIFTING
COLUMN OF XX(300,10)
CONTAINS NUMBER OF ROWS TO READ FOR EACH TYPE OF DATA
EVALUATION OF MROW(CUL)

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 SUBSCRIPT OF FIRST DATA VARIABLE ON EACH LINE OF INPUT
 COUNTER FOR THE NUMBER OF THRUPUTS PROCESSED
 1 IF THRUPUTS ARE BEING USED, 0 OTHERWISE
 ROW OF MATRIX A(50,12)
 COLUMN OF MATRIX A(50,12)
 CONTAINS APPROPRIATION CODES FOR EACH ROW OF MATRIX
 SFROW(RW) EVALUATION OF SFROW(RW)
 APCODE CONTAINS CODE FOR STATUS OF CREATE ATTEMPT
 ISTAT
 FILENAME:
 IN NAME OF DATA INPUT FILE
 WORD1 WORD FOR CHECKING SYNTAX OF INPUT DATA
 WORD2 CHECK SYNTAX OF DATA
 WORD3 CHECK SYNTAX OF DATA
 ADDEL IDENTIFIER FOR AIRCD, MICO, OR TRACO
 TYPE TYPE OF VARIABLE (AC, THRUPUTS, ETC)
 JUT NAME OF OUTPUT FILE USED FOR STORING RESULTS
 TYPE, DIMENSION AND EQUIVALENCE STATEMENTS:
 REAL SF(300), XN(300), YN(300), AC(300), CF(300), UC(300), EC(300), BC(300)
 REAL PB(300), PC(300), THRUPUTS(300)
 REAL AC50,12), F(5), G(12), XX(300,10)
 REAL AMT, SF, X, INFTP, SUMTP, SUMAT
 INTEGER LN, YEAR, COLM, NRDW(10), NN, BEGIN, NTP, TPSWITCH
 FILENAME IN, WORD1, WORD2, WORD3, MODEL, TYPE, OUT
 EQUIVALENCE (XXX1,1), SF(1)
 EQUIVALENCE (XXX1,2), XN(1)
 EQUIVALENCE (XXX1,3), YN(1)
 EQUIVALENCE (XXX1,4), AC(1)
 EQUIVALENCE (XXX1,5), CF(1)
 EQUIVALENCE (XXX1,6), UC(1)
 EQUIVALENCE (XXX1,7), EC(1)

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1030 IF(MODEL .EQ. "AIRCO") P=2
1040 IF(MODEL .EQ. "AMICO") P=3
1050 IF(MODEL .EQ. "TRACO") P=4
1060 DO 1045 I=1,50
1070 1045 IF(SFRW(I) .EQ. 2) SFRWM(I)=P
1080 READ(IN,2010,END=1999,ERR=1060) LN, TYPE
1090 COLM=0
1100 IF(TYPE .EQ. "SF") COLM=1
1110 IF(TYPE .EQ. "XN") COLM=2
1120 IF(TYPE .EQ. "YN") COLM=3
1130 IF(TYPE .EQ. "AC") COLM=4
1140 IF(TYPE .EQ. "CF") COLM=5
1150 IF(TYPE .EQ. "UC") COLM=6
1160 IF(TYPE .EQ. "EC") COLM=7
1170 IF(TYPE .EQ. "PB") COLM=8
1180 IF(TYPE .EQ. "PC") COLM=9
1190 IF(TYPE .EQ. "THRUPUTS") COLM=10
1200 IF(COLM .NE. 0) GO TO 1070
1210 PRINT 2040, IN, LN, TYPE; STOP
1220 PRINT 2050, IN, LN; STOP
1230 1070 CONTINUE
1240 NN=NROW(COLM)
1250 IF(COLM .EQ. 10) GO TO 1120
1260 DO 1080 J=1,NN
1270 READ(IN,2010,END=1090,ERR=1100) LN, F
1280 BEGIN=1+(J-1)*5
1290 XX(BEGIN ,COLM)=F(1)
1300 XX(BEGIN+1, COLM)=F(2)
1310 XX(BEGIN+2, COLM)=F(3)
1320 XX(BEGIN+3, COLM)=F(4)
1330 1080 XX(BEGIN+4, COLM)=F(5)
1340 GO TO 1050

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1350 1090 PRINT 2060, IN, LN, TYPE, MN, STOP
1360 1100 PRINT 2070, IN, LN, TYPE, MN, STOP
1370 1120 CONTINUE
1380C IF YN(5) IS NOT BEING USED, CALCULATE IT AS ONE HALF OF BUILDUP.
1390C PLUS LEVEL, PLUS ONE HALF OF PHASED DOWN.
1400C IF(ABS(YN(5)) .LE. 0.01) YN(5)=0.5*YN(1)+YN(2)+0.5*YN(3)
1410C READS FIRST LINE OF THRUPUTS BLOCK:
1420C NTP=0
1430C READ(IN,2010,END=1999,ERR=1130) LN, WORD1, WORD2, WORD3
1440C IF(WORD1 .EQ. "ROW") WORD2 .EQ. "CDL" .AND. WORD3 .EQ.
1450C "AMT") GO TO 1140
1460C PRINT 2080, IN; STEP
1470C 1130 PRINT 2090, IN, LN; STOP
1480C 1140 TPSWITCH=1
1490C THRUPUTS VALUES WILL BE READ LATER...
1500 1999 CONTINUE
1510C DENOM=ALOG(2.0)
1520C DO 1155 I=1,50
1530C IF(ABS(EC(I)) .LE. 0.01) GO TO 1155
1540C BC(I)=ALDG(EC(I))/DENOM
1550 1155 CONTINUE
1560C A(2,1)=XN(1)*AC(1)*SF(1)
1570C A(2,2)=XN(2)*AC(2)*SF(1)
1580C A(2,3)=XN(3)*AC(3)*SF(1)
1590C A(2,4)=XN(4)*AC(4)*SF(1)
1600C A(2,5)=XN(5)*AC(5)*SF(1)
1610C A(2,6)=XN(6)*AC(6)*SF(1)
1620C A(2,7)=XN(7)*AC(7)*SF(1)
1630C A(2,8)=XN(8)*AC(8)*SF(1)
1640C A(2,9)=XN(9)*AC(9)*SF(1)
1650C A(2,10)=XN(10)*AC(10)*SF(1)
1660C
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1570 A(5,1)=UC(1)*XN(1)**(1.+B(1))*SF(1)
1580 A(5,2)=UC(2)*XN(2)**(1.+B(2))*SF(1)
1590 A(5,3)=UC(3)*XN(3)**(1.+B(3))*SF(1)
1600 A(5,4)=UC(4)*XN(4)**(1.+B(4))*SF(1)
1610 A(5,5)=UC(5)*XN(5)**(1.+B(5))*SF(1)
1620 A(5,6)=UC(6)*XN(6)**(1.+B(6))*SF(1)
1630 A(5,7)=UC(7)*XN(7)**(1.+B(7))*SF(1)
1640 A(5,8)=UC(8)*XN(8)**(1.+B(8))*SF(1)
1650 A(5,9)=UC(9)*XN(9)**(1.+B(9))*SF(1)
1660 A(5,10)=UC(10)*XN(10)*{1.+B(10)}*SF(1)

1770C
1780 A(7,1)=XN(21)*AC(11)*SF(1)
1790 A(7,2)=XN(22)*AC(12)*SF(1)
1800 A(7,3)=XN(23)*AC(13)*SF(1)
1810 A(7,4)=XN(24)*AC(14)*SF(1)
1820 A(7,5)=XN(25)*AC(15)*SF(1)
1830 A(7,6)=XN(26)*AC(16)*SF(1)
1840 A(7,7)=XN(27)*AC(17)*SF(1)
1850 A(7,8)=XN(28)*AC(18)*SF(1)
1860 A(7,9)=XN(29)*AC(19)*SF(1)
1870 A(7,10)=XN(30)*AC(20)*SF(1)

1880C
1890 A(8,1)=(XN(31)*AC(21)+XN(32)*AC(22))*SF(1)
1900 A(8,2)=(XN(33)*AC(23)+XN(34)*AC(24))*SF(1)
1910 A(8,3)=(XN(35)*AC(25)+XN(36)*AC(26))*SF(1)
1920 A(8,4)=(XN(37)*AC(27)+XN(38)*AC(28))*SF(1)
1930 A(8,5)=(XN(39)*AC(29)+XN(40)*AC(30))*SF(1)
1940 A(8,6)=(XN(41)*AC(31)+XN(42)*AC(32))*SF(1)
1950 A(8,7)=(XN(43)*AC(33)+XN(44)*AC(34))*SF(1)
1960 A(8,8)=(XN(45)*AC(35)+XN(46)*AC(36))*SF(1)
1970 A(8,9)=(XN(47)*AC(37)+XN(48)*AC(38))*SF(1)
1980 A(8,10)=(XN(49)*AC(39)+XN(50)*AC(40))*SF(1)

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1990C
2000 A(9,1)=(XN(51)*AC(41)+XN(52)*AC(42))*SF(1)
A(9,2)=(XN(53)*AC(43)+XN(54)*AC(44))*SF(1)
A(9,3)=(XN(55)*AC(45)+XN(56)*AC(46))*SF(1)
A(9,4)=(XN(57)*AC(47)+XN(58)*AC(48))*SF(1)
A(9,5)=(XN(59)*AC(49)+XN(60)*AC(50))*SF(1)
A(9,6)=(XN(61)*AC(51)+XN(62)*AC(52))*SF(1)
A(9,7)=(XN(63)*AC(53)+XN(64)*AC(54))*SF(1)
A(9,8)=(XN(65)*AC(55)+XN(66)*AC(56))*SF(1)
A(9,9)=(XN(67)*AC(57)+XN(68)*AC(58))*SF(1)
A(9,10)=(XN(69)*AC(59)+XN(70)*AC(60))*SF(1)

2040
2050
2060
2070
2080
2090

2100C
2110C
2120C
2130C

2140C
 2150C
 2160 A(14,1)=(XN(81)*AC(71)+XN(91)*AC(81))*SF(P)+
 UC(11)*(XN(101)+PB(11))**(1.+B(11))-PB(11)**(1.+B(11)))*
 (1.+CF(11))*SF(P)
 2170&
 2180& A(14,2)=(XN(82)*AC(72)+XN(92)*AC(82))*SF(P)+
 UC(12)*(XN(102)+PB(12))**(1.+B(12))-PB(12)**(1.+B(12)))*
 (1.+CF(12))*SF(P)
 2190
 2200&
 2210& A(14,3)=(XN(83)*AC(73)+XN(93)*AC(83))*SF(P)+
 UC(13)*(XN(103)+PB(13))**(1.+B(13))-PB(13)**(1.+B(13)))*
 (1.+CF(13))*SF(P)
 2220
 2230& A(14,4)=(XN(84)*AC(74)+XN(94)*AC(84))*SF(P)+
 UC(14)*(XN(104)+PB(14))**(1.+B(14))-PB(14)**(1.+B(14)))*
 (1.+CF(14))*SF(P)
 2240&
 2250 A(14,5)=(XN(85)*AC(75)+XN(95)*AC(85))*SF(P)+
 UC(15)*(XN(105)+PB(15))**(1.+B(15))-PB(15)**(1.+B(15)))*
 (1.+CF(15))*SF(P)
 2260&
 2270&
 2280 A(14,6)=(XN(86)*AC(76)+XN(96)*AC(86))*SF(P)+
 UC(16)*(XN(106)+PB(16))**(1.+B(16))-PB(16)**(1.+B(16)))*
 (1.+CF(16))*SF(P)
 2290&
 2300& A(14,7)=(XN(87)*AC(77)+XN(97)*AC(87))*SF(P)+
 UC(17)*(XN(107)+PB(17))**(1.+B(17))-PB(17)**(1.+B(17)))*
 (1.+CF(17))*SF(P)
 2310
 2320&
 2330& A(14,8)=(XN(88)*AC(78)+XN(98)*AC(88))*SF(P)+
 UC(18)*(XN(108)+PB(18))**(1.+B(18))-PB(18)**(1.+B(18)))*
 (1.+CF(18))*SF(P)
 2340
 2350&
 2360& A(14,9)=(XN(89)*AC(79)+XN(99)*AC(89))*SF(P)+
 UC(19)*(XN(109)+PB(19))**(1.+B(19))-PB(19)**(1.+B(19)))*
 (1.+CF(19))*SF(P)
 2370
 2380&
 2390& A(14,10)=(XN(90)*AC(80)+XN(100)*AC(90))*SF(P)+
 UC(20)*(XN(110)+PB(20))**(1.+B(20))-PB(20)**(1.+B(20)))*
 (1.+CF(20))*SF(P)

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2470C
2480      A(15,1)=CF(21)*AC(14,1)
2490      A(15,2)=CF(22)*AC(14,2)
2500      A(15,3)=CF(23)*AC(14,3)
2510      A(15,4)=CF(24)*AC(14,4)
2520      A(15,5)=CF(25)*AC(14,5)
2530      A(15,6)=CF(26)*AC(14,6)
2540      A(15,7)=CF(27)*AC(14,7)
2550      A(15,8)=CF(28)*AC(14,8)
2560      A(15,9)=CF(29)*AC(14,9)
2570      A(15,10)=CF(30)*AC(14,10)

2580C
2590C
2600      A(16,1)=XN(111)*AC(91)*SF(P)
2610      A(16,2)=XN(112)*AC(92)*SF(P)
2620      A(16,3)=XN(113)*AC(93)*SF(P)
2630      A(16,4)=XN(114)*AC(94)*SF(P)
2640      A(16,5)=XN(115)*AC(95)*SF(P)
2650      A(16,6)=XN(116)*AC(96)*SF(P)
2660      A(16,7)=XN(117)*AC(97)*SF(P)
2670      A(16,8)=XN(118)*AC(98)*SF(P)
2680      A(16,9)=XN(119)*AC(99)*SF(P)
2690      A(16,10)=XN(120)*AC(100)*SF(P)

2700C
2710C
2720C
2730C
2740C
```

NOTE: DATA, ROW 17, IS CALCULATED AS A PERCENTAGE OF
ALL OTHER INVESTMENT CELLS IN EACH COLUMN. THUS, IT IS
CALCULATED ONLY AFTER ALL THRUPUTS ARE READ IN, BELOW.

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2760 A(18,1)=XN(121)*AC(101)*SF(7)+XN(122)*AC(102)*SF(P)
2770 A(18,2)=XN(123)*AC(103)*SF(7)+XN(124)*AC(104)*SF(P)
2780 A(18,3)=XN(125)*AC(105)*SF(7)+XN(126)*AC(106)*SF(P)
2790 A(18,4)=XN(127)*AC(107)*SF(7)+XN(128)*AC(108)*SF(P)
2800 A(18,5)=XN(129)*AC(109)*SF(7)+XN(130)*AC(110)*SF(P)
2810 A(18,6)=XN(131)*AC(111)*SF(7)+XN(132)*AC(112)*SF(P)
2820 A(18,7)=XN(133)*AC(113)*SF(7)+XN(134)*AC(114)*SF(P)
2830 A(18,8)=XN(135)*AC(115)*SF(7)+XN(136)*AC(116)*SF(P)
2840 A(18,9)=XN(137)*AC(117)*SF(7)+XN(138)*AC(118)*SF(P)
2850 A(18,10)=XN(139)*AC(119)*SF(7)+XN(140)*AC(120)*SF(P)

2860C
2870C
2880C
2890 28900& A(20,1)=XN(141)*AC(121)*SF(P)+
2910 XN(151)*AC(131)*(1.+CF(31))*SF(P)
2920& A(20,2)=XN(142)*AC(122)*SF(P)+
2930 XN(152)*AC(132)*(1.+CF(32))*SF(P)
2940& A(20,3)=XN(143)*AC(123)*SF(P)+
2950 XN(153)*AC(133)*(1.+CF(33))*SF(P)
2960& A(20,4)=XN(144)*AC(124)*SF(P)+
2970 XN(154)*AC(134)*(1.+CF(34))*SF(P)
2980& A(20,5)=XN(145)*AC(125)*SF(P)+
2990 XN(155)*AC(135)*(1.+CF(35))*SF(P)
3000& A(20,6)=XN(146)*AC(126)*SF(P)+
3010 XN(156)*AC(136)*(1.+CF(36))*SF(P)
3020& A(20,7)=XN(147)*AC(127)*SF(P)+
3030 XN(157)*AC(137)*(1.+CF(37))*SF(P)
3040& A(20,8)=XN(148)*AC(128)*SF(P)+
3050 XN(158)*AC(138)*(1.+CF(38))*SF(P)
3060& A(20,9)=XN(149)*AC(129)*SF(P)+
3070 XN(159)*AC(139)*(1.+CF(39))*SF(P)
3080& A(20,10)=XN(150)*AC(130)*SF(P)+
3090C XN(160)*AC(140)*(1.+CF(40))*SF(P)

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3100C
3110 A(21,1)=CF(41)*A(14,1)
3120 A(21,2)=CF(42)*A(14,2)
3130 A(21,3)=CF(43)*A(14,3)
3140 A(21,4)=CF(44)*A(14,4)
3150 A(21,5)=CF(45)*A(14,5)
3160 A(21,6)=CF(46)*A(14,6)
3170 A(21,7)=CF(47)*A(14,7)
3180 A(21,8)=CF(48)*A(14,8)
3190 A(21,9)=CF(49)*A(14,9)
3200 A(21,10)=CF(50)*A(14,10)

3210C
3220C
3230 A(22,1)=XN(161)*AC(141)*SF(P)
3240 A(22,2)=XN(162)*AC(142)*SF(P)
3250 A(22,3)=XN(163)*AC(143)*SF(P)
3260 A(22,4)=XN(164)*AC(144)*SF(P)
3270 A(22,5)=XN(165)*AC(145)*SF(P)
3280 A(22,6)=XN(166)*AC(146)*SF(P)
3290 A(22,7)=XN(167)*AC(147)*SF(P)
3300 A(22,8)=XN(168)*AC(148)*SF(P)
3310 A(22,9)=XN(169)*AC(149)*SF(P)
3320 A(22,10)=XN(170)*AC(150)*SF(P)

3330C
3340C
3350C
3360C
3370 A(26,7)=XN(187)*XN(191)*(AC(256)+AC(262)+AC(263))*YN(5)*SF(3)
3380 A(26,10)=XN(190)*XN(192)*(AC(257)+AC(263)+AC(269))*YN(5)*SF(3)
3390 A(27,7)=XN(187)*XN(193)*(AC(258)+AC(264)+AC(270))*YN(5)*SF(3)
3400 A(27,10)=XN(190)*XN(194)*(AC(259)+AC(265)+AC(271))*YN(5)*SF(3)
3410 A(28,7)=XN(187)*XN(195)*(AC(260)+AC(266))*YN(5)*SF(3)
3420 A(28,10)=XN(190)*XN(196)*(AC(261)+AC(267))*YN(5)*SF(3)
3430 A(29,7)=XN(187)*(XN(191)+XN(193)+XN(195))*AC(274)*YN(5)*SF(3)
3440 A(29,10)=XN(190)*(XN(192)+XN(194)+XN(196))*AC(275)*YN(5)*SF(3)
3450C

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3460C
3470C
3480 A(31•1)=XN(181)*XN(201)*AC(151)*YN(5)/1000000.0*SF(7)
A(31•2)=XN(182)*XN(202)*AC(152)*YN(5)/1000000.0*SF(7)
A(31•3)=XN(183)*XN(203)*AC(153)*YN(5)/1000000.0*SF(7)
A(31•4)=XN(184)*XN(204)*AC(154)*YN(5)/1000000.0*SF(7)
A(31•5)=XN(185)*XN(205)*AC(155)*YN(5)/1000000.0*SF(7)
A(31•6)=XN(186)*XN(206)*AC(156)*YN(5)/1000000.0*SF(7)
A(31•7)=XN(187)*XN(207)*AC(157)*YN(5)/1000000.0*SF(7)
A(31•8)=XN(188)*XN(208)*AC(158)*YN(5)/1000000.0*SF(7)
A(31•9)=XN(189)*XN(209)*AC(159)*YN(5)/1000000.0*SF(7)
A(31•10)=XN(190)*XN(210)*AC(160)*YN(5)/1000000.0*SF(7)
3570
3580C
3590C
3600C
3610 A(32•1)=XN(181)*XN(201)*AC(161)*YN(5)/1000000.0*SF(7)
A(32•2)=XN(182)*XN(202)*AC(162)*YN(5)/1000000.0*SF(7)
A(32•3)=XN(183)*XN(203)*AC(163)*YN(5)/1000000.0*SF(7)
A(32•4)=XN(184)*XN(204)*AC(164)*YN(5)/1000000.0*SF(7)
A(32•5)=XN(185)*XN(205)*AC(165)*YN(5)/1000000.0*SF(7)
A(32•6)=XN(186)*XN(206)*AC(166)*YN(5)/1000000.0*SF(7)
A(32•7)=XN(187)*XN(207)*AC(167)*YN(5)/1000000.0*SF(7)
A(32•8)=XN(188)*XN(208)*AC(168)*YN(5)/1000000.0*SF(7)
A(32•9)=XN(189)*XN(209)*AC(169)*YN(5)/1000000.0*SF(7)
A(32•10)=XN(190)*XN(210)*AC(170)*YN(5)/1000000.0*SF(7)
3710C
3720C
3730C
3740 A(33•6)=XN(186)*AC(246)*YN(5)/1000000.0*SF(5)
A(33•7)=XN(187)*AC(247)*YN(5)/1000000.0*SF(5)
A(33•10)=XN(190)*AC(250)/1000000.0*SF(5)
3750
3760
3770C
3780C

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A(35,1)=(XN(201)*YN(5)/PC(11)-1)*XN(181)*AC(171)*SF(7)
A(35,2)=(XN(202)*YN(5)/PC(12)-1)*XN(182)*AC(172)*SF(7)
A(35,3)=(XN(203)*YN(5)/PC(13)-1)*XN(183)*AC(173)*SF(7)
A(35,4)=(XN(204)*YN(5)/PC(14)-1)*XN(184)*AC(174)*SF(7)
A(35,5)=(XN(205)*YN(5)/PC(15)-1)*XN(185)*AC(175)*SF(7)
A(35,6)=(XN(206)*YN(5)/PC(16)-1)*XN(186)*AC(176)*SF(7)
A(35,7)=(XN(207)*YN(5)/PC(17)-1)*XN(187)*AC(177)*SF(7)
A(35,8)=(XN(208)*YN(5)/PC(18)-1)*XN(188)*AC(178)*SF(7)
A(35,9)=(XN(209)*YN(5)/PC(19)-1)*XN(189)*AC(179)*SF(7)
A(35,10)=(XN(210)*YN(5)/PC(20)-1)*XN(190)*AC(180)*SF(7)

3900C
3910C
3920
3930
3940
3950
3960
3970
3980
3990
4000
4010
4020C

A(36,1)=(XN(201)*YN(5)/PC(11)-1)*XN(181)*AC(181)*SF(P)
A(36,2)=(XN(202)*YN(5)/PC(12)-1)*XN(182)*AC(182)*SF(P)
A(36,3)=(XN(203)*YN(5)/PC(13)-1)*XN(183)*AC(183)*SF(P)
A(36,4)=(XN(204)*YN(5)/PC(14)-1)*XN(184)*AC(184)*SF(P)
A(36,5)=(XN(205)*YN(5)/PC(15)-1)*XN(185)*AC(185)*SF(P)
A(36,6)=(XN(206)*YN(5)/PC(16)-1)*XN(186)*AC(186)*SF(P)
A(36,7)=(XN(207)*YN(5)/PC(17)-1)*XN(187)*SF(P)
A(36,8)=(XN(208)*YN(5)/PC(18)-1)*XN(188)*SF(P)
A(36,9)=(XN(209)*YN(5)/PC(19)-1)*XN(189)*SF(P)
A(36,10)=(XN(210)*YN(5)/PC(20)-1)*XN(190)*AC(190)*SF(P)

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4030C
4040C
4050 A(37,1)=(XN(201)*YN(5)/PC(11)-1)*XN(181)*
PC(21)*PC(31)*AC(191)/1000000.0*SF(7)
A(37,2)=(XN(202)*YN(5)/PC(12)-1)*XN(182)*
PC(22)*PC(32)*AC(192)/1000000.0*SF(7)
A(37,3)=(XN(203)*YN(5)/PC(13)-1)*XN(183)*
PC(23)*PC(33)*AC(193)/1000000.0*SF(7)
A(37,4)=(XN(204)*YN(5)/PC(14)-1)*XN(184)*
PC(24)*PC(34)*AC(194)/1000000.0*SF(7)
A(37,5)=(XN(205)*YN(5)/PC(15)-1)*XN(185)*
PC(25)*PC(35)*AC(195)/1000000.0*SF(7)
A(37,6)=(XN(206)*YN(5)/PC(16)-1)*XN(186)*
PC(26)*PC(36)*AC(196)/1000000.0*SF(7)
A(37,7)=(XN(207)*YN(5)/PC(17)-1)*XN(187)*
PC(27)*PC(37)*AC(197)/1000000.0*SF(7)
A(37,8)=(XN(208)*YN(5)/PC(18)-1)*XN(188)*
PC(28)*PC(38)*AC(198)/1000000.0*SF(7)
A(37,9)=(XN(209)*YN(5)/PC(19)-1)*XN(189)*
PC(29)*PC(39)*AC(199)/1000000.0*SF(7)
A(37,10)=(XN(210)*YN(5)/PC(20)-1)*XN(190)*
PC(30)*PC(40)*AC(200)/1000000.0*SF(7)
4100&
4110
4120&
4130
4140&
4150
4160&
4170
4180&
4190
4200&
4210
4220&
4230
4240&
4250C
4260C
4270C
4280
4290
4300
4310
4320
4330
4340
4350
4360
4370
4380C

A(38,1)=CF(61)*A(14,1)*YN(5)
A(38,2)=CF(62)*A(14,2)*YN(5)
A(38,3)=CF(63)*A(14,3)*YN(5)
A(38,4)=CF(64)*A(14,4)*YN(5)
A(38,5)=CF(65)*A(14,5)*YN(5)
A(38,6)=CF(66)*A(14,6)*YN(5)
A(38,7)=CF(67)*A(14,7)*YN(5)
A(38,8)=CF(68)*A(14,8)*YN(5)
A(38,9)=CF(69)*A(14,9)*YN(5)
A(38,10)=CF(70)*A(14,10)*YN(5)

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4390C
4400 A(40,1)=XN(181)*XN(211)*AC(201)*YN(5)*SF(7)
4410 A(40,2)=XN(182)*XN(212)*AC(202)*YN(5)*SF(7)
4420 A(40,3)=XN(183)*XN(213)*AC(203)*YN(5)*SF(7)
4430 A(40,4)=XN(184)*XN(214)*AC(204)*YN(5)*SF(7)
4440 A(40,5)=XN(185)*XN(215)*AC(205)*YN(5)*SF(7)
4450 A(40,6)=XN(186)*XN(216)*AC(206)*YI(5)*SF(7)
4460 A(40,7)=XN(187)*XN(217)*AC(207)*YN(5)*SF(7)
4470 A(40,8)=XN(188)*XN(218)*AC(208)*YN(5)*SF(7)
4480 A(40,9)=XN(189)*XN(219)*AC(209)*YN(5)*SF(7)
A(40,10)=XN(190)*XN(220)*AC(210)*YN(5)*SF(7)

4500C
4510C
4520C
4530C
4540 A(41,1)=AC(211)*YN(5)*SF(7)
4550 A(41,2)=AC(212)*YN(5)*SF(7)
4560 A(41,3)=AC(213)*YN(5)*SF(7)
4570 A(41,4)=AC(214)*YN(5)*SF(7)
4580 A(41,5)=AC(215)*YN(5)*SF(7)
4590 A(41,6)=AC(216)*YN(5)*SF(7)
4600 A(41,7)=AC(217)*YN(5)*SF(7)
4610 A(41,8)=AC(218)*YN(5)*SF(7)
4620 A(41,9)=AC(219)*YN(5)*SF(7)
A(41,10)=AC(220)*YN(5)*SF(7)

4540C
4550C
4560C

ALCCM*

2 FEB 1976

4670 A(43,7)=XN(187)*(XN(191)+XN(193)+XN(195))*CF(73)*AC(221)*YN(5)*SF(8)
4680 A(43,10)=XN(190)*(XN(192)+XN(194)+XN(196))*CF(74)*AC(222)*YN(5)*SF(8)
4690 A(44,7)=CF(75)*(A(26,7)+A(27,7)+A(28,7))
4700 A(44,10)=CF(76)*(A(26,10)+A(27,10)+A(28,10))
4710 A(45,7)=XN(187)*(XN(191)+XN(193)+XN(195))*AC(225)*YN(5)*SF(7)
4720 A(45,10)=XN(190)*(XN(192)+XN(194)+XN(196))*AC(226)*YN(5)*SF(7)
4730 A(46,7)=XN(187)*(XN(191)+XN(193)+XN(195))*AC(229)*YN(5)*SF(8)
4740 A(46,10)=XN(190)*(XN(192)+XN(194)+XN(196))*AC(230)*YN(5)*SF(8)
4750C
4760C
4770C
4780 A(47,1)=AC(231)*YN(5)*SF(7)
4790 A(47,2)=AC(232)*YN(5)*SF(7)
4800 A(47,3)=AC(233)*YN(5)*SF(7)
4810 A(47,4)=AC(234)*YN(5)*SF(7)
4820 A(47,5)=AC(235)*YN(5)*SF(7)
4830 A(47,6)=AC(236)*YN(5)*SF(7)
4840 A(47,7)=AC(237)*YN(5)*SF(7)
4850 A(47,8)=AC(238)*YN(5)*SF(7)
4860 A(47,9)=AC(239)*YN(5)*SF(7)
4870 A(47,10)=AC(240)*YN(5)*SF(7)
4880C
4890C

3 FEB 1976

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TOTALS ARE CALCULATED HERE:

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5300C
5310C
5320      DO 1172 ICOL=1,10
5330      A(1,ICOL)=A(2,ICOL)+A(3,ICOL)+A(4,ICOL)+A(5,ICOL)+A(6,ICOL)+
5340&      A(7,ICOL)+A(8,ICOL)+A(9,ICOL)+A(10,ICOL)+A(11,ICOL)
5350      A(12,ICOL)=A(13,ICOL)+A(14,ICOL)+A(15,ICOL)+A(16,ICOL)+A(17,ICOL)+
5360&      A(18,ICOL)+A(19,ICOL)+A(20,ICOL)+A(21,ICOL)+A(22,ICOL)+
5370&      A(23,ICOL)
5380      A(25,ICOL)=A(26,ICOL)+A(27,ICOL)+A(28,ICOL)+A(29,ICOL)
5390      A(30,ICOL)=A(31,ICOL)+A(32,ICOL)+A(33,ICOL)
5400      A(34,ICOL)=A(35,ICOL)+A(36,ICOL)+A(37,ICOL)
5410      A(39,ICOL)=A(40,ICOL)+A(41,ICOL)
5420      A(42,ICOL)=A(43,ICOL)+A(44,ICOL)+A(45,ICOL)+A(46,ICOL)+A(47,ICOL)
5430      A(24,ICOL)=A(25,ICOL)+A(30,ICOL)+A(34,ICOL)+A(38,ICOL)+A(39,ICOL)+*
5440&
5450      A(48,ICOL)=A(1,ICOL)+A(12,ICOL)+A(24,ICOL)
5460      A(50,ICOL)=A(48,ICOL)+A(49,ICOL)
5470      1172 CONTINUE
5480      DO 1173 IRW=1,50
5490      A(IRW,1)=A(IRW,1)+A(IRW,2)+A(IRW,3)+A(IRW,4)+A(IRW,5)+*
5500&      A(IRW,6)+A(IRW,7)+A(IRW,8)+A(IRW,9)+A(IRW,10)
5510      1173 CONTINUE
5520      TOTAL=A(50,11)
5530      IF (ABS(TOTAL) .LE. 0.01) GO TO 1174
5540      DO 1175 IRW=1,50
5550      1175 A(IRW,12)=A(IRW,11)*100.0/TOTAL
5560      1174 CONTINUE
5570C
5580C
5590C
```


ALCCM*

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5230 2040 FORMAT(H-,"TYPE OF VARIABLE NOT UNDERSTOOD. SEE DATA INPUT FILE ",A8
5940& "/*." "XLINE NUMBER: ",I5," TYPE: ",A3,"//"
5950& "THE VARIABLE TYPE MUST BE SELECTED FROM THE FOLLOWING: ",A3,"//"
5960& "XSF XN YN AC CF UC EC PB PC THRUPUTS",A3,"//"
5970& "XIS PREVIOUS DATA BLOCK TOO LONG?",A3,"//",3("*****"),A3,"//")
5980 2050 FORMAT(H-,"ERROR IN DATA FILE ",A3,"//"
5990& "XON OR AFTER LINE NUMBER ",I5,"//"
6000& "XIS PREVIOUS DATA BLOCK TOO LONG?",A3,"//",3("*****"),A3,"//")
6010 2060 FORMAT(H-,"ERROR IN DATA INPUT FILE ",A3,"//"
6020& "XUNEXPECTED END OF FILE ON OR AFTER LINE ",I5,"//"
6030& "XTHE DATA BLOCK FOR ",A3," MUST HAVE EXACTLY ",I2," ROWS OF DATA. IS IT TOO SHORT?",A3,"//",3("*****"),A3,"//")
6040& 2070 FORMAT(H-,"ERROR IN DATA FILE ",A3,"//"
6050& "XON OR AFTER LINE NUMBER ",I5,"//",3("*****"),A3,"//")
6070 2080 FORMAT(H-,"ERROR IN DATA FILE ",A3,"//"
6080& "XTHRUPUTS SECTION. SECOND LINE OF THE BLOCK MUST READ:",A3,"//"
6090& "XROW COL AMT",A3,"//",3("*****"),A3,"//")
6100 2090 FORMAT(H-,"ERROR IN DATA FILE ",A3,"//"
6110& "XTHRUPUTS SECTION. ON OR AFTER LINE NUMBER ",I5,"//",3("*****"),A3,"//")
6120 2100 FORMAT(H-,"ERROR IN DATA FILE ",A3,"//"
6130& "XTHRUPUTS SECTION. LINE NUMBER ",I5,"//"
6140& "XWHERE THE AMOUNT ",F12.5,"//"
6150& "XIS BEING PUT INTO COLUMN ",I5,"//"
6160& "XSELECT COLUMNS FROM 1 TO 10 ONLY.",A3,"//",3("*****"),A3,"//")
6170 2110 FORMAT(H-,"ERROR IN DATA FILE ",A3,"//",LINE NUMBER ",I5,"//"
6180& "XWHERE THE AMOUNT ",F12.5," IS BEING PUT INTO ROW ",I5,"//"
6190& "XTHIS IS NOT A LEGAL ROW FOR THRUPUTS.",A3,"//",3("*****"),A3,"//")
6200 2120 FORMAT(H-,"ERROR IN DATA FILE ",A3,"//",LINE NUMBER ",I5,"//"
6210& "XSHIFT FACTOR ",I5," IS REQUIRED FOR ROW ",I5,"//",A3,"//")
6220& "XBUT WAS NOT FOUND.",A3,"//"
6230& "XTHRUPUTS BLOCK MUST BE LAST.",A3,"//",3("*****"),A3,"//")

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3 FEB 1976

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3240 2130 FORMAT(1H-,15," THRUPUTS HAVE BEEN ADDED, AND THE 10F AWT IS:",//),
3250& "XRAW:      "F12.5',//,"XSHIFTED: "F12.5,//)
3260 2135 FORMAT(1H   "LIFE CYCLE COST ESTIMATE IS: "F12.5,//)
3270 2140 FORMAT(13.1X,F11.2,8(F9.2),F11.2,F12.3,F7.2)
3280 2150 FORMAT(13.1X,1X,I2,1X,A8,1X,A8)
3290 2160 FORMAT(1H-,"RESULTS STORED IN ",A3)
3300 CALL EXIT
3310 STOP;

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